

AMENDMENTS TO THE CLAIMS:

1. (currently amended) A method for producing hydroxylammonium salts by reacting nitrous oxide (NO) with a molar hydrogen surplus in a reaction vessel in an aqueous medium of strong mineral acids in the presence of a noble metal catalyst suspended on a carbon-based support at excess pressure up to 10 bar and temperatures up to 80°C, the hydroxylammonium salt being constantly removed from the reaction vessel, said reaction vessel being a stirred reactor with an agitator shaft and agitator blades attached to ~~[[it]]~~ the agitator shaft via a hub and bearing surface or support, characterized in that:

a gas inlet and distribution system is provided in ~~[[the]]~~ a lower part of the stirred reactor,

a disk agitator is placed immediately above the gas inlet and distribution system,

the disk agitator comprising the hub with the bearing surface or support ~~of which comprising with~~ angled, concave and tilted agitator blades that rotate ~~their~~ angled ~~[[or]]~~ and concave sides in ~~[[the]]~~ a direction of motion, and

a two-blade blade agitator is provided on the agitator shaft in ~~[[the]]~~ an upper part of the stirred reactor, ~~[[its]]~~ individual leaves of the blade agitator being offset like lamellas at an angle of 0 to 30°C to ~~[[the]]~~ a blade axis so that they constantly wet ~~[[the]]~~ a reactor cap when rotating.

2. (original) The method according to claim 1 wherein sulfuric acid at a 4 to 5-normal concentration is used as the strong mineral acid and the product is hydroxylammonium sulfate.

3. (previously presented) The method for producing hydroxylammonium salts according to claim 1 wherein hydrogen and NO are used at a molar ratio of 1.9 to 2.0 : 1.0.

4. (previously presented) The method for producing hydroxylammonium salts according to claim 1 wherein the suspended catalyst (including its support) is used in a liquid suspension at 7 to 50 g/l and a mean diameter of 30 to 80 μ m.

5. (previously presented) The method for producing hydroxylammonium salts according to claim 1 wherein platinum is used as a noble metal catalyst at a concentration of 0.1 to 0.5 percent by weight in relation to its carbon support.

6. (currently amended) The method for producing hydroxylammonium salts according to claim 1 wherein [[the]] gases escape from an annular gas inlet and distribution system with an average gas bubble diameter of 5 mm to 6 mm and a gas speed of 7 to 30 m/sec.

7. (currently amended) The method for producing hydroxylammonium salts according to claim 1 wherein 6 concave and tilted agitator blades are attached to the rotating hub of the disk agitator.

8. (previously presented) The method for producing hydroxylammonium salts according to claim 1 wherein wall baffles are arranged in the stirred reactor.

9. (currently amended) The method for producing according to claim 1 wherein the two-blade blade agitator in the top portion of the stirred reactor is placed at an angle of incidence of 45° to 90° in relation to ~~[[the]]~~ a liquid level in the reactor, wherein ~~[[it]]~~ the blade agitator consists of offset individual lamella-like leaves, and wherein ~~it has an~~ the blade agitator diameter ~~[[of]]~~ is 0.3 to 0.4 relative to the reactor diameter.

10. (currently amended) The method for producing hydroxylammonium salts according to claim 1 wherein ~~[[the]]~~ a blade height of the individual leaves of the blade agitator is 0.2 to 0.5 relative to a diameter of the blade agitator ~~diameter~~.

11. (previously presented) The method for producing hydroxylammonium salts according to claim 1 wherein the disk agitator in the bottom portion of the reactor is operated at a peripheral speed of 5 to 15 m/sec.